DOE/RL-95-103
Revision 2

Hanford Site Guide for Preparing and Maintaining Generator Group Pollution Prevention Program Documentation

United States
Department of Energy
Richland, Washington

Approved for Public Release

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ABSTRACT

This document provides guidance to generator groups for preparing and maintaining documentation of Pollution Prevention/Waste Minimization Program activities. Documentation guidance for the following five P2/WMin elements are discussed:

- Fiscal Year Goals
- Budget and Staffing
- Waste Minimization Assessments
- Quarterly and Annual Pollution Prevention Reporting
- Waste Minimization Certification

Hanford Home Page access to reporting and certification forms is discussed, and hard copies of the following forms are provided in the appendices:

- Quarterly Report on Waste Reduction Accomplishments
- Quarterly Status Report
- Annual Report on Waste Reduction Accomplishments
- Waste Minimization Certification Form

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ABBREVIATIONS AND ACRONYMS

BHI	Bechtel Hanford, Inc.
CDR	Conceptual Design Review/Report
CFR	Code of Federal Regulations
CY	Calendar Year
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DOE-HQ	U.S. Department of Energy, Headquarters
DOE-RL	U.S. Department of Energy, Richland Operations Office
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EPCRA	*Emergency Planning and Community Right-To-Know Act of 1986*
ERDF	Environmental Restoration Disposal Facility
FDH	Fluor Daniel Hanford, Inc.
FTE	Full Time Equivalent
FY	Fiscal Year
HLW	High-Level Waste
LEFF	Process Waste Water
LLW	Low-Level Waste
MLLW	Mixed Low-Level Waste
MTRU	Mixed Transuranic Waste
OHAZ	State Regulated Waste
P2	Pollution Prevention
P2OA	Pollution Prevention Opportunity Assessment
P2/Wmin	Pollution Prevention/Waste Minimization
PCB	Polychlorinated biphenyl
PHMC	Project Hanford Management Contract
PFP	Plutonium Finishing Plant
PNNL	Pacific Northwest National Laboratory
PPG	Pollution Prevention Group
PPOA	Pollution Prevention Opportunity Assessment
PUREX	Plutonium Uranium Extraction Facility
RCRA	*Resource Conservation and Recovery Act of 1976*
RFSH	Rust Federal Services Hanford, Inc.
RHAZ	RCRA Hazardous Waste
SAN	Solid Sanitary Waste
SpG	Specific Gravity
TRU	Transuranic Waste
TSCA	*Toxic Substances Control Act of 1976*,Toxic Substance (PCB's, etc.)
TSD	Treatment, Storage, or Disposal
USC	United States Code
WAC	Washington Administrative Code
WMH	Waste Management of Hanford, Inc.
WMINRS	Waste Minimization Reporting System

DEFINITIONS

Affirmative Procurement. Refers to a program that ensures that items composed of recovered materials will be purchased to the maximum extent practicable, consistent with Federal law and procurement regulations (RCRA, Section 6002). Guidance on this program has been issued and is updated as EPA issues additional guidelines.

Cleanup/Stabilization Waste. Cleanup/stabilization includes environmental restoration of contaminated media (soil, groundwater, surface water, sediments, etc.), stabilization of nuclear and non-nuclear (chemical) materials, and deactivation and decommissioning (including decontamination) of facilities.

Cleanup/stabilization waste consists of one-time operations waste produced from environmental restoration activities, including primary and secondary wastes associated with retrieval and remediation operations, "legacy wastes," and wastes from decontamination and decommissioning/transition operations. It also includes all *Toxic Substances Control Act of 1976* (TSCA) regulated wastes, such as polychlorinated biphenyl-contaminated fluids or equipment.

Cleanup/stabilization activities that generate wastes do not necessarily occur at a single point in time, but may last for several years while producing wastes. By definition, these activities are not considered to be routine (periodic and/or on-going), because *the waste is a direct result of past operations and activities*, rather than a current process. Newly generated wastes that are produced during these "one-time operations" are considered a secondary waste stream, and are separately accounted for whenever possible. This secondary (newly generated) waste usually results from common activities such as handling, sampling, treatment, repackaging, shipping, etc.

Generator. Each contractor within the scope of the Pollution Prevention/Waste Minimization (P2/WMin) Program whose activities or processes produce waste.

Generator Group. As defined by the responsible contractor, any discrete activity, project, or facility whose act or process produces waste.

Goal. A specific result toward which efforts are directed.

Hazardous Substance. Any hazardous substance listed as a hazardous substance in the *Emergency Planning and Community Right-to-Know Act* and any further updates, and all ozone depleting compounds as defined by the *Montreal Protocol of October 1987* and any further updates of the protocol.

Hazardous Waste. Those solid wastes that exhibit any of the characteristics of hazardous waste identified in 40 Code of Federal Regulations (CFR) 261, Subpart C (e.g., ignitable, corrosive, reactive, acutely hazardous, or acutely toxic), or that are listed in 40 CFR 261, Subpart D, "List of Hazardous Waste."

Low-Level Waste (LLW). Waste that contains radioactivity and is not classified as high-level waste, transuranic waste, or spent nuclear fuel, or byproduct material as defined by U.S. Department of Energy (DOE) Order 5820.2A (DOE 1988a). Test specimens of fissionable material that are irradiated for research and development only, and not for the production of power or plutonium, may be classified as LLW, provided the concentration of transuranic is less than 100 nanocuries per gram (nCi/g).

Mixed Waste. Waste containing both radioactive and hazardous components as defined by the *Atomic Energy Act of 1954* and the *Resource Conservation and Recovery Act of 1976* (RCRA), respectively.

Non-Routine Waste. Identical to waste from Cleanup/Stabilization activities.

Pollution Prevention. The use of materials, processes, or practices that reduce or eliminate the creation of pollutants or wastes at the source. It includes practices that reduce the use of hazardous and nonhazardous materials, energy, water, or other resources as well as those that protect natural resources through conservation or more efficient use.

RCRA-Regulated Waste. Solid waste, not specifically excluded from regulations under 40 CFR 261.4, "Identification and Listing of Hazardous Waste," or delisted by petition, that is either a listed hazardous waste (40 CFR 261.30 to 261.33) or exhibits the characteristics of a hazardous waste (40 CFR 261.20 to 261.24).

Recycling. Recycling techniques are characterized as use, reuse, and reclamation techniques (resource recovery). **Use** or **reuse** involves the return of a potential waste material either to the originating process as a substitute for an input material or to another process as an input material. **Reclamation** is the processing or regeneration of a material to recover a useable product.

Routine Operations Waste. Normal operations waste produced from any type of production, analytical, and/or research and development laboratory operations; treatment, storage, or disposal operations; "work-for-others;" or any periodic and recurring work that is considered ongoing. The term "normal operations" refers to the type of ongoing process (e.g., production) not the specific activity that produced the waste. Periodic laboratory or facility clean-outs and spill cleanups that occur as a result of these processes are also considered normal operations.

Sanitary Waste. All non-hazardous and non-radioactive waste disposed in a sanitary landfill including demolition waste, industrial wastes, and wastes such as garbage generated by normal housekeeping activities.

Source Reduction. The elimination or reduction of waste generation at the source. Source reduction activities and techniques include substitution of less hazardous materials, process optimization or modification, technology changes and administrative changes (inventory control), and housekeeping practices (material segregation). Source reduction results in reducing or eliminating potential waste material exiting from a process.

Spent Nuclear Fuel. Fuel that has been withdrawn from a nuclear reactor following irradiation, but that has not been reprocessed to remove its constituent elements.

State-Only Hazardous Waste. Any other hazardous waste not specifically regulated under TSCA or RCRA, such as used oil, that may be regulated by Ecology under WAC 173-303.

Transuranic Waste. Without regard to source or form, waste that is contaminated with alpha-emitting transuranium radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of assay. Heads of Field Elements can determine that other alpha contaminated wastes, peculiar to a specific site, must be managed as transuranic waste

(DOE 1988a).

Treatment. Any method, technique, or process (including neutralization) designed to change the physical, chemical, or biological character or composition of any hazardous, radioactive, or sanitary waste so as to neutralize such waste, to recover energy or material resources from the waste, or to render such waste nonhazardous; safer to transport, store, or dispose; or amenable for recovery or storage; or reduced in volume.

TSCA-Regulated Waste. Hazardous chemical wastes, both liquid and solid, containing more than 50 parts per million (ppm) of PCBs or PCBs regulated for disposal (DOE 1996).

Waste Reduction. Reduction of the total amount of waste that is generated and disposed of by DOE operations through waste minimization and treatment activities.

Waste Minimization. Elimination or minimization of the generation of waste before treatment, storage, or disposal. Waste minimization is any source reduction or recycling activity that results in (1) reduction of total volume of waste, (2) reduction of toxicity of waste, or (3) both, as long as that reduction is consistent with the general goal of minimizing present and future threats to human health and the environment.

Waste Minimization Assessment. An evaluation and appraisal of a process, activity, or operation to identify potential waste minimization opportunities. The preferred method at the Hanford Site is conducting a Pollution Prevention Opportunity Assessment (P2OA). Other evaluation methods, such as value engineering studies and engineering evaluations, are also acceptable.

HANFORD SITE GUIDE FOR PREPARING AND MAINTAINING GENERATOR GROUP POLLUTION PREVENTION PROGRAM DOCUMENTATION

1.0 INTRODUCTION

1.1 PURPOSE OF GUIDE

This document provides guidance to contractor generator groups for developing and maintaining documentation of Pollution Prevention/Waste Minimization (P2/WMin) Program activities. The program documentation is intended to demonstrate generator compliance with U.S. Department of Energy (DOE) requirements as well as state and Federal regulations.

1.2 BACKGROUND

The purpose of the Hanford Site P2/WMin Program is to eliminate or reduce waste generation and pollutant releases to the environment, use of toxic substances, and to conserve resources. The P2/WMin Program, has been developed to meet P2/WMin public law requirements, Federal and state regulations, and DOE requirements (DOE/RL 1996b). The Hanford Site P2/WMin Program is implemented through sitewide and contractor programs. The Hanford Site Waste Minimization Plan provides overall requirements (DOE/RL 1996b). Each prime contractor (Fluor Daniel Hanford, Inc. (FDH), Bechtel Hanford, Inc. (BHI), and Pacific Northwest National Laboratory (PNNL)) has an implementation plan describing how the requirements will be met (RFSH 1996, BHI 1997, PNNL 1996). The documentation guide identifies the documentation required to be maintained on file that demonstrates compliance with the requirements.

The U.S. Environmental Protection Agency (EPA) provides guidance for a *Resource Conservation and Recovery Act of 1976* (RCRA)-compliant waste minimization program (EPA 1993). The DOE also outlines the elements of a generator-specific pollution prevention program (DOE 1996). The EPA and DOE program elements are presented in Appendix A and are applicable at the Hanford Site, contractor, and generator group level.

Generator groups are required to maintain documentation on file only for the key pollution prevention elements listed in Table 1-1. Documentation of these key elements will demonstrate compliance with regulatory and DOE requirements.

Table 1-1. Key Program Elements for Generator Group Pollution Prevention Program Documentation.

1. Fiscal Year Goals
2. Budget and Staffing
   - Budget and full time equivalent staff supporting P2/WMin activities.
3. Waste Minimization Assessments
4. Pollution Prevention Reporting
   - Quarterly reports
   - Annual report (for CY 1997 only)
5. Waste Minimization Certification

2.0 REQUIRED POLLUTION PREVENTION/WASTE MINIMIZATION PROGRAM DOCUMENTATION

This section discusses the documentation for the P2/WMin elements that are to be kept on file.

2.1 FISCAL YEAR GOALS

Establishing goals is essential to a successful P2/WMin Program and is an important and required element of the Hanford Site P2/WMin Program. Pollution prevention goals are necessary to (1) meet Federal, state, and DOE regulations and reporting requirements; (2) provide a system for tracking progress and measuring success of P2/WMin activities; and (3) focus efforts on results-oriented, achievable activities that reduce the generation of waste and pollutants to all media, the use of hazardous substances, and the conservation of energy and natural resources.

The DOE has established waste reduction goals for waste generated from routine operations for the DOE complex to be achieved by December 31, 1999. The May 1996 memorandum from The Secretary of Energy announcing the goals is presented in Appendix B (DOE 1996b). Calendar Year (CY) 1993 waste generation data is the baseline year for these goals. U.S. Department of Energy-Richland Operations Office (DOE-RL) has accepted these goals for the Hanford Site. These goals are applicable to the routine and cleanup/stabilization waste generators as noted. The goals are itemized below.

- For routine operations:
  - Reduce the generation of low-level radioactive waste 50-percent
  - Reduce the generation of mixed low-level waste 50-percent
  - Reduce the generation of hazardous waste, including RCRA-, State-, and TSCA-regulated wastes, 50-percent
  - Reduce the generation of sanitary waste 33-percent
  - Reduce total releases and offsite transfers for treatment and disposal of *Emergency Planning and Community Right-To-Know Act of 1986* (EPCRA) 313 toxic chemicals 50-percent.
- For routine operations and cleanup/stabilization activities:
  - Recycle 33-percent of sanitary waste.
- For affirmative procurement:
  - Increase affirmative procurement of EPA-designated recycled products listed in Table C1-1 of Appendix C to 100-percent, except where they are not commercially available at a reasonable price or do not meet performance standards.

Generators or generator groups shall establish fiscal year waste reduction goals. FY 1998 waste reduction goals are to be submitted to the WMH

P2/WMin group by January 15, 1998. Subsequent fiscal year waste reduction goals are to be submitted by October 15th. In establishing waste reduction goals for wastes generated from routine operations, generators or generator groups should consider waste generation ceilings assigned to their company to support meeting the fiscal year or Secretary of Energy's goals. Qualitative goals may be established.

Fiscal year goals are to be approved and signed by generator or generator group management and submitted to the WMH P2/WMin organization and also filed with the generator's or generator group's program documentation. A suggested format for the documentation of established goals is provided in Table 2-1.

Table 2-1. Instructions for Preparing Fiscal Year Pollution Prevention/Waste Minimization Goals

1. List on the table below the waste generation forecast or other basis for the waste type listed.
2. Enter the estimated quantity resulting from source reduction and recycling as a percentage of the forecasted quantity.

Fiscal Year Goals For FY ____.
__ Routine Waste __ Cleanup/Stabilization or Non-Routine Waste

Waste classification	Waste forecast or Other Basis of Estimate	Source reduction (Percent)	Recycling (Percent)
Low-level waste (LLW)	(m^3)		
Transuranic waste (TRU)	(m^3)		
Mixed Low-level waste (MLLW)	(m^3)		
Mixed Transuranic waste (MTRU)	(m^3)		
RCRA hazardous waste	(kg)		
State-only hazardous waste	(kg)		
TSCA regulated waste	(kg)		

Approved: _____
Generator or Generator Group Manager

2.2 BUDGET AND STAFFING

2.2.1 Pollution Prevention Budget Documentation Requirements

Emphasis should be placed on budgeting for activities that will help contractor generator groups achieve their goals. Within the limits of available funding, the DOE pollution prevention program elements listed in Appendix A are to be considered in a pollution prevention program for an individual facility. Separate, identifiable funding can be established within individual cost account plans at the cost account plan, work, or task package level, depending on the size of the Pollution Prevention budget and the organization of the contractor generator group program.

Copies of the appropriate budget documentation will be maintained as program documentation. In cases where funding is not established in separate budget documents, estimated budget information should be maintained as documentation. The quarterly status report, discussed in Section 2.4.1, also provides documentation of planned and actual budget as well as the pollution prevention staffing level in full time equivalents.

2.3 WASTE MINIMIZATION ASSESSMENTS

An important part of an effective P2/WMin Program is the identification of waste streams as well as the activities that produce those wastes. Once those waste streams have been characterized (constituents, concentrations, quantities), they can be prioritized and evaluated for reduction. In evaluating a given waste stream for reduction it is desirable that alternative reduction methods be considered and economically evaluated. Evaluating alternative waste reduction methods in order to identify waste reduction opportunities should be the primary purpose of a waste minimization assessment. The preferred assessment method at the Hanford Site is conducting a Pollution Prevention Opportunity Assessment (P2OA). Other evaluation methods, such as value engineering studies, engineering evaluations, and P2/WMin in design assessments, are also acceptable.

The P2OA is a structured assessment process that utilizes a systematic approach to identify and document waste minimization opportunities. Training on conducting P2OAs is available from the WMH P2/WMin Group. The Pollution Prevention Opportunity Assessments -- A Training and Resource Guide, (DOE/RL 1996a) is also available to help waste generator groups complete these activities.

Waste minimization assessments must also be documented. Documentation should be maintained in the program documentation file. The results of waste minimization assessments should also be placed on the Hanford Site Pollution Prevention Home Page. To place an assessment on the Home Page, submit completed waste minimization assessments along with an assessment summary in electronic format to the WMH P2/WMin group point of contact.

2.4 POLLUTION PREVENTION/WASTE MINIMIZATION REPORTING

This section discusses the P2/WMin reporting requirements. Regularly reported data will be submitted electronically using formats available at http://www.rl/gov:1050/polprev/areport/areport.htm. Alternatively, if access to the Hanford intranet is unavailable, data may be submitted on hard copy using the formats presented in Appendix D.

2.4.1 Pollution Prevention Quarterly Reports

A Quarterly Report is to be submitted by all Hanford Site waste generator groups on the 15th of January, the 15th of April, the 15th of July, and the 15th of October. The Quarterly Report is divided into two electronic forms: 1) Waste Reduction Accomplishments and 2) Status. Both forms are accessible via the Hanford Site Pollution Prevention Home Page. The WMH P2/WMin group is available to answer questions or provide further clarification on completing the Quarterly Reports. Quarterly Reports should be submitted electronically to the respective WMH P2/WMin point of contact.

2.4.2 Annual Reports

The CY 1997 annual report on waste reduction accomplishments must be submitted to WMH P2/WMin group by January 15, 1998. The CY 1997 Annual Report is a single electronic form on Waste Reduction Accomplishments. The form is accessible via the Hanford Site Pollution Prevention Home Page. The WMH P2/WMin group is available to answer questions or provide further clarification on completing the Annual Report. The CY 1997 annual reports should be submitted electronically to the respective WMH P2/WMin point of contact.

The CY 1997 annual report will be the last annual report required to be submitted by the generator groups. For subsequent years, quarterly report data will be compiled by the WMH P2/WMin group for Hanford's Annual Report. Generator groups will have the opportunity to review information. The Annual Report will be submitted by the WMH P2/WMin group according to a schedule established by DOE-HQ.

2.5 WASTE MINIMIZATION CERTIFICATION

All generator groups shall certify annually that a waste minimization program is in place as required in (40 CFR 264.73). A waste minimization certification form is shown in Appendix E and is also available on the pollution prevention home page at http://www.rl/gov:1050/polprev/areport/cert.htm. The form should be completed and signed by facility management and maintained on file in the facility's operating record.

3.0 REFERENCES

40 CFR 261, "Identification and Listing of Hazardous Waste," *Code of Federal Regulations*, as amended.

40 CFR 264.73, "Operating Record," *Code of Federal Regulations*, as amended.

Atomic Energy Act of 1954, 42 USC 2011, et seq.

BHI, 1997, *Environmental Contractor Waste Minimization and Pollution Prevention Program Plan*, BHI-00099, Revision 2, Bechtel Hanford, Inc., Richland, Washington, October 1, 1997

DOE, 1988, *Radioactive Waste Management*, DOE Order 5820.2A, U.S. Department of Energy, Washington, D.C.

DOE, 1994, *Waste Minimization Reporting System (WMINRS version 2.0) Users Manual*, U.S. Department of Energy, Washington, D.C.

DOE, 1996, *Pollution Prevention Program Plan*, U.S. Department of Energy, DOE/S-0118, Washington, D.C.

DOE/RL 1996a, *Pollution Prevention Opportunity Assessments--A Training and Resource Guide*, DOE/RL-96-80, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL 1996b, *Hanford Site Waste Minimization and Pollution Prevention Awareness Program Plan*, DOE/RL-91-31, U. S. Department of Energy, Richland Operations Office, Richland, Washington.

EPA, 1993, "Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program," *Federal Register*, Vol. 58, No. 102, Washington, D.C.

Emergency Planning and Community Right-to-Know Act, as amended, 42 USC 11013, 11028, et seq.

Resource Conservation and Recovery Act of 1976, 42 USC 6901, et seq.

PNNL, 1996, *Pollution Prevention Program Implementation Plan*, PNL-MA-822, Revision 1, Pacific Northwest National Laboratory, Richland, Washington, September 1996

RFSH, 1996, *Project Hanford Management Contract Pollution Prevention Program Implementation Plan*, HNF-EP-0496, Revision 2, Rust Federal Services Hanford, Inc., Richland, Washington, December 1996

Toxic Substances Control Act of 1976, 15 USC 2601, et seq.

WAC 173-303, *Dangerous Waste Regulations*, Publication No. 92-91, Amended November 1995, Washington State Department of Ecology, Olympia, Washington.

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APPENDIX A

POLLUTION PREVENTION PROGRAM ELEMENTS

A1.1 Generator Group Program Implementation Elements

Pollution prevention program implementation elements recommended by the DOE are given below (DOE 1996). Table A1-1 lists pollution prevention program elements recommended by EPA (EPA 1993). A descriptive reference that discusses each element is also indicated in Table A1-1.

1. Organization and Infrastructure
   - Designate a generator group pollution prevention (P2) coordinator
   - Interface with the sitewide P2 coordinator(s)
   - Participate in the sitewide P2 Network
   - Institute corrective actions resulting from program evaluation.
2. Program Development
   - Develop and maintain generator group P2 program documentation
   - Establish goals
   - Develop activity schedules for specific tasks and projects
   - Obtain budgets for generator group programmatic activities
   - Assign personnel to develop and implement the generator group P2 program
   - Integrate P2 practices into operating procedures.
3. Sitewide Program Participation
   - Involve employees in job-specific P2 practices
   - Exchange information and technologies with other waste generator groups
   - Seek technical assistance
   - Track material use
   - Report on material usage, recycling, and progress made in implementing P2 practices
   - Participate in sitewide waste reduction and recycling programs.

4. Training

   - Identify job-specific P2 training needs
   - Participate in P2 Opportunity Assessment training.

5. P2 Opportunity Assessments/Implementation

   - Identify and evaluate current and potential waste-generating activities
   - Identify and prioritize P2 opportunities
   - Conduct P2OAs on waste streams
   - Implement process modifications and material substitutions
   - Evaluate the potential of new technologies on waste-generating activities.

6. Use affirmative procurement practices

   - Encourage affirmative procurement in the purchase of EPA-designated recycle products.

7. Design Considerations

   - Design P2 principles and practices into new and modified facilities
   - Incorporate P2 into facility upgrades and process modifications and document these upgrades for projects in the conceptual design review/report (CDR) phase of a project valued at a general plant project or higher

8. Program Evaluation

   - Evaluate generator group program implementation status
   - Evaluate waste reduction/performance.

Table A1-1. Pollution Prevention Program Elements.

EPA guidance[1] Waste Minimization Program elements (per RCRA)[2]	Program Element Descriptive Reference
A. Top management support	
Hanford Site policy	Hanford Site plan
Company policy	Contractor plans
Set goals	Hanford Site plan and contractor plans
Commitment opportunity implementation	Hanford Site plan and contractor plans
Facility coordinator	Contractor plans
Publicize successes	Hanford Site plan and contractor plans
Incentives	Hanford Site plan and contractor plans
Training	Hanford Site plan and contractor plans
B. Characterization of waste generation and waste management costs	Hanford Site plan and Contractor plans
C. Waste minimization assessments	
Identification of opportunities	Hanford Site plan and Contractor plans
Determine true costs of the waste	Contractor plans
D. Cost allocation system	Hanford Site plan and contractor plans
E. Technology transfer	Hanford Site plan and contractor plans
F. Program implementation and evaluation	Hanford Site plan and contractor plans

[1] (EPA, 1993)
[2] (RCRA, 1976)

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APPENDIX B

SECRETARIAL MEMORANDUM: DEPARTMENT POLLUTION PREVENTION GOALS

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The Secretary of Energy
Washington, DC 20585

May 3, 1995

MEMORANDUM FOR HEADS OF DEPARTMENTAL ELEMENTS

FROM: HAZEL R. O'LEARY

SUBJECT: Departmental Pollution Prevention Goals

The Department of Energy pollution prevention strategy is to reduce the generation of all waste streams and thus minimize the impact of departmental operations on the environment. Preventing pollution also reduces risks to the health and safety of workers and the general public and saves scarce budget dollars. To demonstrate the Department's commitment to pollution prevention, we have set the following goals to be achieved by December 31, 1999, using calendar year 1993 as a baseline year.

For Routine Operations:

- Reduce by 50 percent the generation of radioactive waste.
- Reduce by 50 percent the generation of low-level mixed waste.
- Reduce by 50 percent the generation of hazardous waste.
- Reduce by 33 percent the generation of sanitary waste.
- Reduce by 50 percent total releases and off-site transfers for treatment and disposal of toxic chemicals.

For All Operations, Including Cleanup/Stabilization Activities:

- Recycle 33 percent of sanitary waste.

For Affirmative Procurement:

- Increase procurement of Environmental Protection Agency-designated, recycled products to 100 percent, except where they are not commercially available competitively at a reasonable price or do not meet performance standards.

Operations Offices will direct sites under their purview to set site-specific goals to assist in achieving the departmental goals. Progress toward meeting the departmental goals will be reported annually to me. It is the responsibility of each Federal and contractor manager to work diligently to meet these goals; to aggressively seek ways to reduce the amount of pollutants generated within the workplace; and to conserve, reuse, and recycle resources.

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APPENDIX C

EPA-DESIGNATED AFFIRMATIVE PROCUREMENT PRODUCTS LIST

Table C1-1 is a list of EPA-designated items considered for affirmative procurement.

Table C1-1. Products Containing Recovered Materials Designated by EPA for Affirmative Procurement.

Category	Original Items	Newly Designated Items
Construction Materials	- Cement and concrete containing fly ash - Building insulation	- Cement and concrete containing blast furnace slag - Carpet - Floor tiles - Laminated paper board - Patio block - Structural fiberboard
Landscape Products		- Hydraulic mulch - Yard trimmings compost
Non-Paper Office Products		- Binders - Office recycling containers - Office waste receptacle - Plastic desktop accessories - Plastic trash bags - Toner cartridges
Paper Products	- Coated printing and writing paper - Bristols (file folders, index cards, tags, tickets) - Newsprint - Paperboard and packaging products - Tissue products - Uncoated printing and writing paper	
Park and Recreation		- Playground surfaces - Running tracks
Transportation Products		- Traffic cones - Traffic barriers

Vehicular Products	- Retread tires - Rerefined lubricating oils	- Reclaimed engine coolant

Reference: Comprehensive Procurement Guideline (60 CFR 21370, May 1, 1995) and the Recovered Materials Advisory Notice (60 CFR 21386, May 1, 1995)

APPENDIX D
QUARTERLY AND ANNUAL REPORT FORMS

Pollution prevention quarterly and annual report forms are included in this appendix. The text of the help files is also included in this appendix. Forms are available for completion and submittal on the Pollution Prevention Home Page.

Copies of these reports should be maintained on file in the generator group program documentation.

D1.1 Quarterly and Annual Report Forms

Quarterly Report on Waste Reduction Accomplishments

Use this form to document **pollution prevention** successes achieved during the past Quarter, such as source reduction and recycling; and relevent waste treatment activities. The form provides for the documentation, by Contractor and Facility, of decreases in waste generation, air emissions, and water effluents through source reduction, and recycling activities.

This form is intended to document each activity or process at Hanford that resulted in waste reduction, hazardous constitutent reduction in waste, recycling both on and off-site, and some on-site treatment activities. Information you supply in completion of this form will be useful in completing various quarterly and annual reports and in determining progress toward goals in reducing waste generation and promoting recycling.

When you are done filling in the form, click on the button located at the bottom of this form labeled 'Submit Data to the PPG Data Base'. A copy of what has been recorded will be echoed back to you. Please review the information to be sure it is correct. If changes are needed, use the **Browser's Back Button** to return to the form. If the information is correct, print/save a copy for your records and click on the **OK button** to complete the reporting.

A help screen is available for each input element. Simply click on the ? help button next to the input text.

Please supply the following information:

? Form Prepared By/For: Bechtel Hanford Inc

? Facility Name:

? Technical Contact: Phone:

? Waste Stream Name:

? Waste Type: (LLW) Low-Level Waste

? Waste Form: ○ Liquid ○ Gas ◉ Solid ○ Sludge

? Waste Source: ◉ Routine ○ Non-Routine
? Describe the Waste Reduction Activity:

? Was this activity the result of P2 in Design Opportunities? ○ Yes
? Waste Min Approach: ◉ Source Reduction ○ Recycling ○ Treatment
? Implementation Date: (mm/yy)
? Amount Reduced:
? Amount Recycled: on-site off-site
? Units: Cubic Meters
? Density: Density Units:
? Estimated Cost of Implementation:
? Estimated Dollar Savings for Quarter:

Optional:

? Estimated Dollar Savings for Next 10 Years:

Enter Password

Submit for initial review Reset Values

Note: Clicking the "Reset Values" box will clear (erase) all data you have entered in the current form.

[Top of Document] or [Top of Form]

RETURN TO: Hanford Home Page or Pollution Prevention Home Page

This page is maintained by the Pollution Prevention Group. For specific questions or comments see our Contacts List or *Send feedback to David Nichols*

The URL for this page is http://www.rl.gov:1050/polprev/areport/qreport.htm
Last Updated: 11/24/97

Quarterly Status Report

A help screen is available for each input element. Simply click on the ? help button next to the input text.

Please supply the following information:

? Form Prepared By/For: Bechtel Hanford Inc

? Facility Name:

? Planned Budget

? Actual Budget

? Full Time Equivalents (FTEs)

? Status on Secretarial Goals

The Following two fields are optional. Any input you provide will be appreciated.

? Status on Facility's Goals

? Status on PPOAs Conducted this Quarter

Planned opportunities identified through P2 in Design:

Enter Password

Submit for initial review | Reset Values

Note: Clicking the "Reset Values" box will clear (erase) all data you have entered in the current form.

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Last Updated: 11/25/97

Annual Report on Waste Reduction Accomplishments

Calendar Year 1997

Use this form to document **pollution prevention** successes such as source reduction and recycling; and relevent waste treatment activities. The form provides for the documentation, by Contractor and Facility, of decreases in waste generation, air emissions, and water effluents through source reduction, and recycling activities.

This form is intended to document each activity or process at Hanford that resulted in waste reduction, hazardous constitutent reduction in waste, recycling both on and off-site, and some on-site treatment activities. Information you supply in completion of this form will be useful in completing various annual reports and in determining progress toward goals in reducing waste generation and promoting recycling.

When you are done filling in the form, click on the button located at the bottom of this form labeled 'Submit Data to the PPG Data Base'. A copy of what has been recorded will be echoed back to you. Please review the information to be sure it is correct. If changes are needed, use the **Browser's Back Button** to return to the form. If the information is correct, print/save a copy for your records and click on the **OK button** to complete the reporting.

A help screen is available for each input element. Simply click on the ? help button next to the input text.

Please supply the following information:

? Form Prepared By/For: Bechtel Hanford Inc

? Facility Name:

? Technical Contact: Phone:

? Waste Stream Name:

? Waste Type: (LLW) Low-Level Waste

? Waste Form: ○ Liquid ○ Gas ◉ Solid ○ Sludge

? Waste Source: ◉ Routine ○ Non-Routine

? Waste Source: ◉ Routine ○Non-Routine
? Describe the Waste Reduction Activity:

? Was this activity the result of P2 in Design Opportunities? ○ Yes
? Waste Min Approach: ◉Source Reduction ○Recycling ○Treatment
? Implementation Date: (mm/yy)
? Amount Reduced:
? Amount Recycled: on-site off-site
? Units: Cubic Meters
? Density: Density Units:
? Estimated Cost of Implementation:
? Estimated Dollar Savings for CY97:

Optional:

? Estimated Dollar Savings for Next 10 Years:

Enter Password

Submit for initial review | Reset Values

Note: Clicking the "Reset Values" box will clear (erase) all data you have entered in the current form.

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Last Updated: 11/24/97

D1.2 Quarterly and Annual Report Guidance

D1.2.1 Guidance for Quarterly and Annual Waste Reduction Accomplishments Report

The text of the help items for the Quarterly Report on Waste Reduction Accomplishments and the Annual Report on Waste Reduction Accomplishments is provided below.

Form Prepared By/For:

Click on the down arrow at the end of the text entry block and select the Contractor that achieved the waste minimization being reported. If the name of the contractor is not in the list: Then please contact your Waste Management Hanford point of contact or send an e-mail to David Nichols to have the list updated.

The database will automatically be updated to include the name of the current P2/WMin representative.

Facility Name:

Enter the name of the Facility or Waste Generator Group. For example: PUREX, PFP, Fire Department, Fleet Maintenance, etc.

Technical Contact: Phone:

Provide the name and phone number of someone familiar enough with the details of this activity to answer questions on the technical content.

Waste Stream Name:

Please provide the SWITS stream code, such as B003 or H016, if applicable. Otherwise, enter the descriptive stream name used at the facility to track cumulative quantities generated by this waste stream. If in doubt, check with the group responsible for tracking/reporting quantities generated. The combination of Contractor, Facility Name, and Waste Stream Name must unique in order to properly track waste reductions and report a rollup at the end of the year.

Waste, Emission or Effluent Type:

Click on the down arrow at the end of the entry box and highlight the appropriate waste type. If the waste type you are reporting is not in the list then please contact your facility representative in the Pollution Prevention Group.

The 10 choices are:

(LLW) Low-Level Waste
(MLLW) Mixed Low-Level Waste
(TRU) Transuranic Waste
(MTRU) Mixed Transuranic Waste
(HLW) High-Level Waste
(RHAZ) RCRA Hazardous Waste

(OHAZ) State Regulated Waste
(SAN) Solid Sanitary Waste
(LEFF) Process Waste Water
(TSCA) Toxic Substance (PCB's, etc,)

Waste Form:

Select one of the 4 waste forms by clicking the radio button preceding the form type you wish to select. The 4 choices are:

Liquid- mostly or all liquid. May contain some solids.
Gas- containerized
Solid- contains no free liquid
Sludge- mostly solids but contains some free liquid

Waste Source:

Selecting the correct waste source is essential since waste minimization goals and reports are different for non-routine waste sources. Click on the radio button that precedes the selection you wish to make. Only one can be selected. The definitions of routine and non-routine wastes seem to change from time to time. Consult the Hanford Guide for Preparing and Maintaining Generator Group Pollution Prevention Program Documentation for the current definition.

Describe the Waste Reduction Activity:

Include the reason for initiating the activity, what was reduced and the actions that enabled the reduction of waste. This description is all the information that is available to those outside the Hanford area so please be as descriptive as possible. This description needs to be entered only once into the database. If you have already reported this activity and provided a description then this field may be left blank.

Was this activity the result of P2 in Design Opportunities:

If this activity is the result of P2 in Design, click the "yes" radio button. Also describe the scope of the design project in, "Describe the Waste Reduction Activity", indicating whether this is a new design or a design upgrade/modification for an existing facility or system.

Waste Minimization Approach:

Select one of the three options provided by clicking on the radio button immediately preceding the correct approach.

Source Reduction
Recycling
Treatment

If the waste was minimized using more that one approach then you must submit a form for each approach. Do not double report waste reduction quantities. Allocate the appropriate percentage to each approach this may be 0-100%.

Implementation Date:

Enter the date this activity was first implemented. Use the format mm/yy for input. For example July 4, 1996 would be 07/96. This field is only for new activities implemented during the current reporting period. If the activity was implemented prior to this reporting period then leave blank or enter N/A.

Amount Reduced:

If you are reporting recycling information then leave this field blank.Otherwise-Enter the numeric value for the total Source Reduction (including hazardous constituent reduction) achieved during this reporting period. The units (kilogram, cubic meters, etc.) for this reduction activity will be identified in box immediately following the Recycling data area.

Amount Recycled:

If you are not reporting a recycling activity then no action is required for these fields.

For a recycling activity enter the numeric value(s) for the quantity recycled on-site, off-site, or both. Do not double report values. Then click on the down arrow of the units box to select the correct units for the quantity reported.

Report only the quantity(s) recycled during this reporting period.

Units:

Use the down arrow in the units box to bring up a list of units to select from. Highlight the correct units for the value(s) entered in the Source reduction, On-Site, and/or Off-site field(s). Federal and State requirements are that sanitary and solid waste quantities be reported in kilograms; all other waste types are reported by volume. Conversions will be made to the required units for you.

Density:

If you reported Sanitary or Solid wastes by volume or reported one of the other waste types by weight (mass)Then you must provide a density factor for conversion. Otherwise you can omit these two fields.

Enter a numeric value for the density. This may be a specific gravity (SpG) which is unitless or mass per unit volume such as pounds per cubic foot. Next--Click on the down arrow in the units box and select the appropriate units.

Estimated Cost of Implementation:

This field applies only to new activities that were implemented during the current reporting period.

Provide a dollar estimate of the total dollar cost to implement this waste reduction activity. Include equipment costs, charges for procedure

modification and any expenses incurred during design, installation, and testing.

Estimated Savings:

Note- This field is for all activities regardless of the implementation date. Enter the dollar amount of savings that were realized this reporting period through implementation of this waste reduction action. Do not include cost of implementation in the calculation. All the savings achieved from changes in disposal, packaging, handling, and administrative costs should be considered.

Estimated Dollar Savings for Next 10 Years:

Note- This is an optional reporting element. If the information is readily available, then please provide it. Enter the dollar amount of savings that are anticipated over the next 10 years. Do not include cost of implementation in the calculation. All the savings achieved from changes in disposal, packaging, handling, and administrative costs should be considered.

D1.2.2 Guidance for Quarterly Status Report

The text of the help items for the Quarterly Status Report is provided below.

Form Prepared By/For:

Click on the down arrow at the end of the text entry block and select the Contractor that achieved the waste minimization being reported. If the name of the contractor is not in the list: Then please contact your Waste Management Hanford point of contact or send an e-mail to David Nichols to have the list updated.

The database will automatically be updated to include the name of the current P2/WMin representative.

Facility Name:

Enter the name of the Facility or Waste Generator Group. For example: PUREX, PFP, Fire Department, Fleet Maintenance, etc.

Planned Budget:

Please provide the amount, in dollars, planned for waste minimization activities for reporting period.

Actual Budget:

Please provide the amount, in dollars, actually spent for waste minimization activities during reporting period.

Full Time Equivalents (FTEs):

Please provide the number of full time equivalents (FTE) involved in waste minimization activities during the reporting period.

Secretarial Goal Status:

For each of the wastes listed below provide 1) Baseline data or basis for the goal, 2) statement of the goal, and 3) status as of the end of the reporting period in achieving that goal.

Routine low-level radioactive waste
Routine low-level mixed waste
Routine hazardous waste
EPCRA 313 toxic chemicals releases and offsite transfers from routine operations (pertains to chlorine only)
Sanitary waste from all activities

Facility Goal Status:

This is an optional reporting element and does not include the status towards achieving the Secretary of Energy goals. Please provide for each goal a brief statement of the current status in attaining that goal.

Example for a second quarter status report for FY97:

No LLW was generated by the facility in 1993. However 25 cubic meters of LLW waste was generated during the previous(FY96) fiscal year due to routine activities. A goal was established for FY97 to keep the generation of LLW at or below the amount generated during the previous FY. During the first quarter 12 cubic meters of LLW were generated and 2 cubic meters were generated during the second quarter. Operations is projecting that they will generate 12 cubic meters during the remainder of the fiscal year.

The status report may contain:

Routine LLW: 1) FY96 generated quantity (25 cubic meters) was the basis of the goal. 2) Goal was not to exceed the FY96 quantity. 3) A total of 14 cubic meters have been generated to date. It is anticipated that the goal will be exceeded by 1 cubic meter.

Status of PPOAs Conducted This Quarter:

This is an optional reporting element. List the title of each PPOA completed during this reporting period. Indicate if this assessment has been made available to all Hanford contractors by adding it to the PPOA database.

Planned Opportunities Identified Through P2 in Design:

If you have identified opportunities through P2 in design, provide a description and a projected implementation date.

Update this item in future quarterly reports only if the status changes.

APPENDIX E

WASTE MINIMIZATION CERTIFICATION FORM

CERTIFICATION:

Facility or Contractor Name(s):

_____

_____

For the facility(ies) listed above, I certify that a waste minimization program is in place to reduce the volume and toxicity of hazardous waste that the facility(ies) generates to the degree determined to be economically practicable; and the proposed method of treatment, storage, and disposal is that practicable method currently available which minimizes the present and future threat to human health and the environment.

Manager: _____
(Printed name and signature)

Title: _____

Company: _____

Date: _____

This form should be signed and kept on file with generator pollution prevention documentation.

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